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10/528,566	12/14/2005	Reinhold Burr	016906-0385	6385

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EXAMINER	
MILLER, SAMANTHA A	
ART UNIT	PAPER NUMBER
3749	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,566	BURR ET AL.	
	Examiner	Art Unit	
	SAMANTHA A. MILLER	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The receipt of applicants amendment filed on 9/23/2010 is acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The text of claim 19 is unclear. The limitations claimed are not readily ascertainable, for example ""the distance", "the location of the division of the air duct into a plurality of subducts", "the location that the air exits" "is provided for at a distance" "a mean diameter". Further, these limitations are not defined in the specification or drawings.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazuya (JP 60110522 A).

KAZUYA teaches:

15. An air duct for supplying air (Fig.3); a metering device (71, 72); and an air-guiding device (Fig.12) comprising a plurality of subducts (4, 5) for dividing air in the air-guiding device, and an outflow region (1) with an outer circumferential region (connected to 5) and a middle region (at 4) and, wherein one subduct (4) leads to the middle region and another subduct (5) leads to the outer circumferential region.

16. The air-guiding device comprises a divided entry region configured such that the air in the air-guiding device is divided into the plurality of subducts without a change in an axial direction of the subducts in the divided entry region (Fig.3).

17. The division in the entry region is symmetrical about a plane formed by a longitudinal center axis of the air duct and a line perpendicular to the longitudinal center axis of the air duct located between the subducts (Fig.4).

18. The air-guiding device further comprises a partition (separating 4 from 5, Fig.3) which, at least in regions, runs along a longitudinal direction of the air duct.

19. The distance between the location of the division of the air duct into a plurality of subducts and the location that the air exits the air-guiding device is 1 to 10 times a mean diameter of the air duct (Fig.12).

20. The air-guiding device further comprises an elbow, wherein the air is divided into a plurality of subducts in the region of the elbow (Fig.3, in the region of elbow 11).

21. The elbow has an angle from 80° to 100° (Fig.3).

22. The angle of the elbow is 90° (Fig.3).

23. The metering device (7) is arranged upstream of the air-guiding device.

24. The metering device (7) is configured to control air which can be fed to individual subducts of the plurality of subducts (Fig.8-9).

25. The metering device controls (7) distribution of incoming air between individual subducts and controls metering of the incoming air.

26 The metering device comprises an actuating device with a double flap controlled by a cam disc or a kinematic mechanism (81, 8, 71b, 72b; Fig.6).

27. The actuating device (8) is connected to an actuating member (81) via a shaft (Fig.6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 15-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasushi (JP10246500) in view of Kazuya et al (JP60110522).

As to independent claim 15, Yasushi shows an air duct for supplying air 10; an air guiding device (the upstream portion of 10 generally) comprising a plurality of subducts for dividing said air (subduct 11, and subducts created between vanes 13 through which flow B occurs —see figs. 1a, b, and c); and an outflow region (the downstream portion of 10 generally) with an middle region and an outer circumferential

region (figs. 1a, 3a and b), wherein one subduct leads to the central region and another leads to the outer circumferential region.

Yasushi does not explicitly show a metering device.

Kazuya et al show a metering device comprising dampers 71,72. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Yasushi by providing the dampers of Kazuya et al in order to allow the main flow A through subduct 11 to be varied).

As to independent claim 28, Yasushi shows an air duct for supplying air 10; an air guiding device (the upstream portion of 10 generally) comprising a plurality of subducts for dividing said air (subduct 11, and subducts created between vanes 13 through which flow B occurs —see figs. 1a, b, and c); wherein one subduct (created by vanes 13) has a helical region. It is noted that the region is both helical and shape and therefore a helical region, and that the region creates a helical airflow and is therefore functionally considered a helical region.

Yasushi does not explicitly show a metering device.

Kazuya et al show a metering device comprising dampers 71,72. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Yasushi by providing the dampers of Kazuya et al in order to allow the main flow A through subduct 11 to be varied).

As to independent claim 33, Yasushi shows an air duct for supplying air 10; an air guiding device (the upstream portion of 10 generally) comprising a plurality of subducts for dividing air (subduct 11, and subducts created between vanes 13 through which flow B occurs —see figs. 1a, b, and c), wherein one of the subducts 11 is configured to impart a spot action to air and another (one of the subducts created between vanes 13) is configured to impart a swirl to the air at the exit.

Yasushi does not explicitly show a metering device.

Kazuya et al show a metering device comprising dampers 71,72. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Yasushi by providing the dampers of Kazuya et al in order to allow the main flow A through subduct 11 to be varied).

As to claim 16, Yasushi shows an entry region comprising the subducts 11 and subducts defined by vanes 13 such that the air guiding device is dividing into a plurality of subducts and the subducts do not have a significant change of direction (note that each subduct defined by vanes 13 maintains substantially the same direction even though each may have a different direction from other subducts).

As to claims 17, 29, and 34, Yasushi shows, in addition to that discussed regarding claim 16, that the entry region is axially symmetrical, as best understood by the examiner.

As to claim 18, the entry comprising at least one partition comprising the wall of subduct 11 running along a longitudinal direction.

As to claim 19, as best understood Yasushi shows all elements.

As to claims 20, 21, 30 and 35, Yasushi shows all elements except an elbow with an angle from 80 to 100 degrees wherein the subduct occur in the region of the elbow. Kazuya et al show this feature. It would have been obvious to one of ordinary skill in the art to modify the apparatus of Yasushi by providing the duct with an elbow in the region of the division in order to provide air to the subduct 11.

As to claim 22, Yasushi in view of Kazuya et al show an angle of 90 degrees.

As to claim 23, Yasushi in view of Kazuya et al shows the metering device upstream of the air guiding device.

As to claims 24, 25, 31, and 36 Yasushi in view of Kazuya et al show the metering device configured to control air to individual ducts comprising the subduct 11 and the distribution of air between ducts.

As to claims 26, 27, 32 and 37, Yasushi in view of Kazuya et al show that the actuating device has a double flap 71, 72 controlled by a cam or kinematic mechanism via a shaft (see eg., fig 6 of Kazuya et al).

As to claim 38 Yasushi teaches the division in the entry region (at 11 and 12 entry) is symmetrical about a plane (symmetrical about airflow A, Fig.1) formed by a longitudinal center axis (about A) of the air duct. Yasushi shows all elements except the centerline of an elbow. Kazuya et al show this feature. It would have been obvious to one of ordinary skill in the art to modify the apparatus of Yasushi by providing the duct with an elbow in order to make the shape of the duct more versatile to more efficiently fit different embodiments.

Claims 15-18, 28, 29, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andreas et al (DE10036776) in view of Meneghin et al (EP1332899).

As to claim 15, Andreas shows an air duct 7 for supplying air; and an air guiding device comprising a plurality of subducts (central subduct 8 and outer subduct 9 for dividing air wherein one of the subducts delivers air to a middle region of an outflow area (e.g., fig. 3) and one of the subducts delivers air to a circumferential region (e.g. fig. 3)

Andreas does not show an air metering device.

Meneghin shows a metering device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Andreas by providing a metering device as taught by Meneghin in order to provide control of the volume of airflow.

As to claim 28, Andreas shows an air duct 7 for supplying air; and an air guiding device comprising a plurality of subducts (central subduct 8 and outer subduct 9 for dividing air wherein one of the subducts (the outer) has an elongated helical region (this region is functionally considered a helical region since a helical airflow flows through it. It is noted that no helical structural elements are claimed).

Andreas does not show an air metering device.

Meneghin shows a metering device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Andreas by

providing a metering device as taught by Meneghin in order to provide control of the volume of airflow.

Alternatively, As to claim 28 Andreas shows an air duct 7 for supplying air; and an air guiding device comprising a plurality of subducts (central subduct 8 and outer subduct 9 for dividing air.

Andreas does not show an air metering device or that one of the subducts has a coiled or helical region.

Meneghin shows a metering device and a stationary helical vane 8 disposed about a cylinder 9. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Andreas by providing a metering device and helical guide vane as taught by Meneghin in order to provide control of the volume of airflow and to better control the pitch of the helical flow through the device.

As to claim 33, Andreas shows an air duct 7 for supplying air; and an air guiding device comprising a plurality of subducts (central subduct 8 and outer subduct 9 for dividing air wherein one of the subducts (the outer) is configured to impart a swirl to the air at the exit and the other subduct (inner) is configured to impart a spot action.

Andreas does not show an air metering device.

Meneghin shows a metering device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Andreas by

providing a metering device as taught by Meneghin in order to provide control of the volume of airflow.

As to claim 16, 17, 29, and 34 Andreas shows the entry region comprising two coaxial cylinders providing substantially no direction change and providing axial symmetry.

As to claim 18, Andreas shows the air guiding device provides a partition running in a longitudinal direction.

Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andrea in view of Meneghin et al as applied to claims 28 and 29 above, and further in view of Kazuya et al.

As to claims 30-32, Andrea in view of Meneghin show all elements except an elbow, and double flaps controlling individual subducts actuated by a cam or kinematic mechanism.

Kazuya et al show these elements as discussed above. It would have been obvious to one of ordinary skill in the art to further modify the apparatus in view of Kazuya et al by providing these elements in order to provide better control of the air by providing individual control, to provide for a means to actuate the damper, and to easily route air to the apparatus around corners.

Response to Arguments

Applicant's arguments filed 9/23/2010 have been fully considered but they are not persuasive.

Applicant contends that KAZUYA does not show a middle region and a plurality of subducts. However, claims are afforded the broadest reasonable interpretation. KAZUYA teach two sub ducts (4 and 5), subduct 4 is shown as being in the middle region of the duct and subduct 5 is shown as being in the outer region of the duct. This is equivalent to Applicant's invention since Applicant defines the middle and outer regions with 11 as a middle subduct and 12 as an outer subduct.

Applicant contends that KAZUYA does not show a circumferential region since it does not have spot action. However, claims are afforded the broadest reasonable interpretation. A circumferential region is merely a region that is at or near the circumference and surrounds the duct. This definition is supported by Applicant's specification and is shown in Applicant's drawings. KAZUYA teaches a region connected to 5 that is considered the circumferential region. There is spot action that occurs at Applicant's circumference, however that is not the actual definition of a circumferential region.

Applicant contends that the air in Yasushi at 13 is different than the air at element 10 and therefore does not teach a plurality of subducts dividing said air. Claims are afforded the broadest reasonable interpretation. YASUSHI teaches supplying air at 10 and this air is made up of air from 13 and 11. YASUSHI teaches an air guiding device at the upstream portion of 10 generally; comprising a plurality of subducts for dividing

said air subduct 11, and subducts created between vanes 13 through which flow B occurs. The air at 13 is divided with air from 11 and air from both 13 and 11 is provided to 10, which means that the same air is provided at 10 and teaches a plurality of subducts dividing said air.

Applicant contends that the rejection of ANDREAS in view of MENEGHIN is moot because of applicant defining air overcomes YASUSHI. However, the Claims 15-18, 28, 29, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andreas et al (DE10036776) in view of Meneghin et al (EP1332899). YASUSHI is not mentioned in this rejection and the rejection is deemed proper.

Conclusion

Applicant's amendment necessitated the new ground(s)of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR '1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samantha A. Miller whose telephone number is 571-272 9967. The examiner can normally be reached on Monday - Thursday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Rinehart can be reached on 571-272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samantha A Miller/
Examiner, Art Unit 3749
12/31/2010

/Steven B. McAllister/
Supervisory Patent Examiner, Art Unit 3749